

Appln. No.: 10/797,176
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AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions, and listings, of claims in the Application.

Listing of Claims:

Claim 1. (Previously presented) A mobile electronic device network employing provisioning techniques for updating electronic devices, the network comprising:

a device server capable of dispensing at least one update;

an electronic device having at least one of firmware and software, the electronic device being communicatively coupled to the device server;

an update service in the electronic device, presence of the update service in the electronic device being determinable by the network, wherein when enabled the update service indicates to the network capability of the electronic device to update at least one of firmware and software, electronic device employing the at least one update to update the at least one of firmware and software; and

wherein one or more parameters specific to updating of firmware and software in the electronic device are provisioned, during provisioning of a number assignment module (NAM) in the electronic device, by the network.

Claim 2. (Original) The network according to claim 1, wherein the device server is adapted to store and dispense a plurality of updates, wherein the at least one update dispensed to the electronic device is selected from the plurality of updates based upon characteristics of the electronic device communicated to the device server.

Claim 3. (Previously presented) The network according to claim 2, further comprising:

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scheduling software for at least one update of one of firmware and software in the electronic device during administration of the NAM parameters by the network.

Claim 4. (Original) The network according to claim 3, wherein the network is capable of determining whether the electronic device supports an over-the-air provisioning function, and wherein the electronic device is capable of executing the over-the-air provisioning function, and wherein the over-the-air provisioning function comprises one of a firmware update function and a software update function in the electronic device.

Claim 5. (Original) The network according to claim 4, wherein one of the firmware update function and the software update function in the electronic device is invoked based upon one of a firmware update service option and a software update service option provided in the electronic device.

Claim 6. (Original) The network according to claim 5, further comprising:
an update agent in the electronic device; and
a network server determining a service option and for permitting the electronic device to initiate over-the-air access to one of the firmware update service option and the software update service option in the electronic device, wherein the network is adapted to employ the means for determining a service option to determine one of an enabled firmware update service option and an enabled software update service option in the electronic device and the network is adapted to invoke the update agent while initializing a number assignment module in the electronic device.

Claim 7. (Original) The network according to claim 6, wherein one of the firmware update service option and the software update service option in the electronic device is adapted to be set by the network without user intervention, and wherein the at

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least one update selected from the plurality of updates is disseminated to the electronic device, and wherein the update agent is invoked in the electronic device for updating one of firmware and software employing the at least one updates.

Claim 8. (Original) The network according to claim 7, further comprising:
over-the-air delivery of the at least one update to the electronic device from a delivery server after determining that one of the firmware update service option and the software update service option in the electronic device is set.

Claim 9. (Original) The network according to claim 4, further comprising:
one of a firmware update service function and a software update service function in the electronic device; and
a network server for facilitating network-initiated over-the-air access to one of the firmware update service option and the software update service option in the electronic device, wherein the network initializes the number assignment module in the electronic device and, after determining that one of the firmware update service option and the software update service option in the electronic device is enabled, initiating download of at least one update and updating one of the firmware and software of the electronic device.

Claim 10. (Original) The network according to claim 1, wherein the electronic device comprises at least one of a plurality of mobile electronic devices, and wherein the plurality of mobile electronic devices comprise at least one of a mobile cellular phone handset, personal digital assistant, pager, MP3 player, and a digital camera.

Claim 11. (Previously presented) A mobile electronic device network adapted to update electronic devices and perform over-the-air number assignment module parameter provisioning, the network comprising:

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an electronic device comprising one of firmware and software, the electronic device also comprising number assignment module parameters specific to updating one or both of firmware and software, the electronic device being communicatively coupled to at least one server; and

wherein presence of support for at least one of a firmware update service option and a software update service option in the electronic device is determinable by the network, wherein when enabled, the presence of support for the at least one of a firmware update service option and a software update service option indicates to the network that the electronic device is capable of updating one of firmware and software, wherein the electronic device is adapted to communicate the presence of support for the one of the firmware update service option and software update service option to the network, and wherein the electronic device is also adapted to communicate device specifications to the network when the network attempts to provision the number assignment module parameters.

Claim 12. (Previously presented) The network according to claim 11, wherein the at least one server dispenses at least one of a plurality of updates to the electronic device based upon the presence of support for the one of the firmware update service option and the software update service option and device specifications communicated to the at least one server by the electronic device.

Claim 13. (Previously presented) The network according to claim 11, wherein the network is adapted to manage updating at least one of firmware and software based upon the presence of support for the one of a firmware update service option and a software update service option in the electronic device determinable by an over-the-air provisioning function in the network.

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Claim 14. (Previously presented) The network according to claim 13, wherein the network is adapted to determine a state of the one of the firmware update service option and the software update service option in the electronic device and provision a universal resource locator in the electronic device for at least one server in the network, wherein the at least server is employed to download updates to the electronic device.

Claim 15. (Original) The network according to claim 11, wherein the electronic device comprises at least one of a plurality of mobile electronic devices, and wherein the plurality of mobile electronic devices comprise at least one of a mobile cellular phone handset, personal digital assistant, pager, MP3 player, and a digital camera.

Claim 16. (Previously presented) A method of updating software in a wireless communication device in a wireless network, the method comprising:

determining a value of one of a firmware update service option number and a software update service option number in the wireless communication device by the wireless network during an over-the-air parameter administration operation for programming number assignment module parameters; and

downloading one of a firmware update and a software update from a server in the wireless network, if one of the firmware update service option number and the software update service option number is determined to have a predetermined value.

Claim 17. (Cancelled)

Claim 18. (Previously presented) The method according to claim 18, wherein the over-the-air parameter administration operation comprises:

paging one of a firmware update service option number and a software update service option number in the wireless communication device;

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verifying an identity of the wireless communication device using at least one authentication process; and

responding to the paging, if the wireless communication device is capable of supporting the over-the-air parameter administration operation.

Claim 19. (Previously presented) The method according to claim 18, wherein responding to the paging further comprises:

indicating support for one of a firmware update service option and the software update service option by sending one of the firmware update service option number and the software update service option number, if the wireless communication device supports one of the firmware update service option and the software update service option; and

indicating lack of support for one of the firmware update service option and the software update service option, if the wireless communication device does not support one of the firmware update service option and the software update service option.

Claim 20. (Original) The method according to claim 16, wherein downloading comprises:

setting a flag in the wireless communication device indicating availability of an update package for updating the wireless communication device during an over-the-air parameter administration operation changing number assignment module parameters;

sending a universal resource locator identifying at least one server to the wireless communication device during an over-the-air parameter administration operation changing number assignment module parameters; and

retrieving update information from the at least one server based upon the flag.

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Claim 21. (Original) The method according to claim 16, wherein determining comprises:

receiving a general page message indicating one of a firmware update service option and a software update service option by the wireless communication device;

verifying support of one of the firmware update service option and the software up-date service option by the wireless communication device; and

sending a response to a base station indicating support of one of firmware and software updates when the wireless communication device verifies support of one of the firmware update service option and the software update service option.

Claim 22. (Original) The method according to claim 21, wherein verifying further comprises:

paging the wireless communication device for one of a firmware update service option number and a software update service option number;

comparing one of the firmware update service option number and the software update service option number received on one of a stored firmware update service option number and a stored software update service option number in the wireless communication device, to determine a match by the wireless communication device;

responding to the paging, if a match occurs, wherein responding to the paging comprises indicating that the wireless communication device is associated with one of the firmware update service option number and the software update service option number; and

responding to the paging indicating a negative match if a match does not occur.

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Claim 23. (Original) The method according to claim 16, wherein the electronic device comprises at least one of a plurality of mobile electronic devices, and wherein the plurality of mobile electronic devices comprise at least one of a mobile cellular phone handset, personal digital assistant, pager, MP3 player, and a digital camera.

Claim 24. (Previously presented) A computer-readable storage, having stored thereon a computer program having a plurality of code sections enabling over-the-air updating of at least one of firmware and software in an electronic device via a wireless network, the code sections executable by a processor for causing the processor to perform the operations comprising:

receiving at least one message from a server over the wireless network as part of an over the air parameter administration process for programming number assignment module parameters, the message comprising a service option parameter;

determining whether a value of the service option parameter corresponds to one of a firmware update service option and a software update service option; and

engaging in over the air updating of the at least one of firmware and software of the electronic device via the wireless network, if it is determined that the value of the service option parameter corresponds to the one of a firmware update service option and a software update service option.

Claim 25. (Previously presented) The computer-readable storage according to claim 24, wherein the electronic device is a battery-operated handheld electronic device.

Claim 26. (Previously presented) The computer-readable storage according to claim 25, wherein the electronic device is a cellular telephone.

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Claim 27. (Previously presented) The computer-readable storage according to claim 24, wherein the received message is a cellular network message for paging a subscriber telephone.

Claim 28. (Previously presented) The computer-readable storage according to claim 24, wherein the received service option parameter is compatible with the Electronics Industries Alliance (EIA)/Telecommunications Industry Association (TIA) IS-683 standard.

Claim 29. (Previously presented) The computer-readable storage according to claim 24, the operations further comprising:

sending a message over the wireless network indicating the presence of support for the one of a firmware update service option and a software update service option, if it is determined that the value of the service option parameter corresponds to the one of a firmware update service option and a software update service option.

Claim 30. (Previously presented) The computer-readable storage according to claim 24, the operations further comprising:

verifying the identity of the server to the electronic device using an authentication procedure, prior to engaging in over the air updating.